

RIPASA SCORE: evaluation of a new scoring system for diagnosis of acute appendicitis and its comparison with ALVARADO SCORE

Introduction:

The accuracy of the Alvarado score in diagnosing acute appendicitis in an Asian population has been disappointingly low. The Raja Isteri Pengiran Anak Saleha Appendicitis score (RIPASA score) is a new scoring system developed in RIPAS hospital, Brunei, Darussalam for diagnosis of acute appendicitis in southeast Asian population. It is a simple qualitative scoring system based on 14 fixed clinical parameters (two demographics, five clinical symptoms, five clinical signs and two investigations) and one additional parameter (foreign national identity card). Even though it is developed for local community, it is suggested to be applicable to all regions with the exception of last parameter. This study aims to evaluate the diagnostic validity of RIPASA SCORE in our local population and to compare it with the Alvarado score for diagnosing acute appendicitis.

Methods:

100 consecutive patients who underwent emergency appendicectomy in Stanley Medical College and Hospital were recruited in the study. Both the RIPASA and Alvarado scores were derived, but decisions for appendicectomy were based on clinical judgement. By analysing the results

using SPSS software-version 17.0, sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) for both scoring systems were calculated.

Results:

100 patients who satisfied the inclusion and exclusion criteria were included in the analysis. At the optimal cut-off threshold score of 7.5, the sensitivity, specificity, PPV and NPV of the RIPASA score were 97.5%,80%,95.1% and 88.9%, respectively. At the cut-off threshold score of 7.0 for the Alvarado score, the sensitivity, specificity, PPV and NPV were 78.8%,75%,92.6% and 46.9% respectively. The RIPASA score correctly classified 97.5% of all patients confirmed with histological acute appendicitis to the high-probability group (RIPASA score greater than 7.5) compared with 78.8% with the Alvarado score (Alvarado score greater than 7.0).

Conclusion:

The RIPASA score at a cut-off threshold total score of 7.5 is a better diagnostic scoring system than the Alvarado score for the diagnosis of acute appendicitis in our local setting.

Keywords: acute appendicitis, appendicectomy, diagnosis, RIPASA score, Alvarado score, surgical, symptoms.